

ABSTRACT OF THE DISCLOSURE

Aqueous latex polymer dispersion compositions are disclosed characterized by their small particle size. The compositions are prepared by emulsion polymerization of one or more ethylenically unsaturated monomer in the presence of an alkyd seed containing sulfonate groups. Coatings based on these latex dispersions have improved advantages in film forming, gloss, hardness, low residual monomer content, less yellowing, and low VOC. The latex dispersions, having average particle sizes of 60-140 nm, are prepared by using a small ratio (i.e. about 2-15 wt.%) of an aqueous alkyd dispersion as the seed for latex particle growth. The waterborne alkyds are based on 5-sodiosulfo-isophthalic acid and either unsaturated or saturated fatty acids. The latex polymer dispersions thus obtained have improved film forming properties as well as low residual monomer content. The latexes are capable of forming clear, hard films at room temperature in the absence of external coalescents. Moreover, the resultant films are essentially non-yellowing. Thus, the latexes of this invention could be formulated into zero- or low- VOC paints for a variety of coating applications.